Navigating Higher Education: The Critical Role of Professional Networks and Social Capital for First-Generation College Students

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Abstract
First-generation college students (FGCS) face persistent academic and social barriers that limit their educational mobility. Central to this challenge is social capital, defined as the networks, relationships, and resources that shape access to opportunity. This review offers a thematic, intersectional analysis of how social capital, grounded in Pierre Bourdieu's theory, influences FGCS academic and professional outcomes. It also examines how digital and in-person networks can mitigate structural inequities. The guiding question is: How do social capital frameworks illuminate FGCS experiences and outcomes, and which institutional interventions most effectively promote equity? Drawing on a critical synthesis of theoretical scholarship, the review identifies key mechanisms through which social capital operates and highlights persistent gaps facing FGCS. The paper concludes with actionable recommendations for institutional leaders and policymakers, emphasizing asset-based, adaptive, and embedded strategies, including targeted support programs and digital platforms, to strengthen networks, expand access, and support student success.
Keywords: first-generation college students, social capital, higher education, professional networks, intersectionality

1. Introduction

First-generation college students (FGCS), defined in this review as individuals whose parents did not complete a four-year college degree (Toutkoushian et al., 2018), make up a significant segment of university populations in the United States and around the world (Whitley et al., 2018). Consider a student like Maria, whose parents immigrated to the U.S. seeking better opportunities. Navigating college without the familial knowledge of academic systems, Maria often felt like she was charting an unknown path. Despite her diligence and curiosity, she quickly realized that success would require more than academic ability alone. While definitions vary, with some scholars focusing on parental attendance at any postsecondary institution, this paper uses the widely accepted benchmark of non-completion of a four-year degree (Toutkoushian et al., 2018). FGCS like Maria contribute substantially to higher education's goals of social mobility and access, yet they encounter persistent, systemic challenges that extend well beyond academics. Compared to their peers, FGCS are less likely to complete degrees, engage in transformative learning experiences, or transition seamlessly into professional roles (Cataldi et al., 2018). These differences are shaped not just by academic preparation or motivation, but by broader institutional and societal forces that influence opportunities.

A recurring theme in the research is the pivotal influence of social capital: the networks, relationships, and resources embedded in social connections on FGCS' educational journeys (Stanton-Salazar, 2011). Social capital includes both concrete guidance and tacit knowledge (unspoken understandings or cultural cues) needed to understand institutional culture, overcome bureaucratic obstacles, and access hidden opportunities in the university environment. Lacking college-going role models, limited exposure to academic culture, and fewer connections to professional networks, many FGCS experience uncertainty, reduced confidence, and feelings of exclusion from the dominant culture of higher education (Collier & Morgan, 2008).

The consequences of lacking social capital are significant and far-reaching. According to Garriott & Nisle (2018), FGCS are more likely to experience imposter syndrome and less inclined to seek assistance from faculty or advisors, even when those supports are available. Rather than just placing the onus on students to initiate help-seeking behaviors, institutions should take responsibility for normalizing and facilitating access to these critical resources. By reframing faculty outreach and support systems as institutional obligations, universities can create a more welcoming and inclusive environment that actively encourages FGCS to engage in high-impact opportunities like internships, research, and study abroad. This shift in institutional practice is essential to prevent students from becoming disengaged and at greater risk of dropping out, ultimately upholding the promise of higher education as a vehicle for social mobility.

On the other hand, research challenges the idea that FGCS are defined solely by deficit. Means & Pyne (2017) demonstrate that high-achieving FGCS often draw on family support, cultivate strong peer relationships, and use personal determination to overcome obstacles. These students develop practical strategies to navigate complex environments, build new networks, and maximize available resources, even when facing structural disadvantages. Such findings underscore the need to recognize both the resilience and resource gaps of FGCS and to employ asset-based approaches that build on their strengths and adaptability, rather than focusing just on challenges (Jones & Morrow, 2022). This perspective prevents deficit thinking and helps identify where support can enhance students' capabilities.

The landscape of the FGCS experience becomes even more complex when viewed through the lens of intersectionality, a framework that examines how overlapping social identities such as race, gender, and socioeconomic status interact to shape individual experiences and outcomes. As Luedke (2017) points out, race, gender, and socioeconomic status combine to create unique barriers and opportunities for support. For example, FGCS who are students of color or women may encounter challenges such as microaggressions, a lack of representation in faculty and leadership, and being left out of mainstream mentorship networks. These intersectional realities demonstrate that universal interventions often fall short and highlight the need for targeted, context-aware solutions.

This review uses a comprehensive, literature-based, thematic analysis of research on FGCS and social capital. As a literature-based study, its findings are limited by the scope and contexts of the existing research. The guiding question is: How do social capital frameworks explain FGCS experiences and outcomes, and which institutional strategies most effectively promote equity? This work uniquely combines intersectional social capital theory with practical analysis of digital platforms, peer networks, and institutional strategies, showing that digital and in-person approaches create new options for FGCS. This synthesis fills key gaps in the literature and delivers clear, asset-based recommendations for practitioners and policymakers. The analysis centers on intersectional influences, institutional structures, and higher education's changing landscape. With a critical look at both problems and solutions, this review offers concrete recommendations for universities and stakeholders seeking to improve equity and FGCS achievement. To properly understand these systemic challenges and the roles of networks, it is important to include the theory of social capital by Bourdieu to analyze the inequities of Maria and other FGCS.

2. Theoretical Framework

Pierre Bourdieu's social capital theory is commonly applied to explain how educational inequalities arise and persist, particularly among first-generation college students. In his seminal work, Bourdieu (1986) defines social capital as the resources and benefits that individuals access through stable social networks and relationships. These advantages, including information, support, and opportunities, are unevenly distributed and closely linked to social class. Social capital, therefore, is not simply about knowing people; it refers to access to valuable resources that are recognized by institutions and embedded in social connections, shaping both educational and professional trajectories.

In the context of higher education, this framework clarifies why students whose parents attended college often enter university with certain built-in benefits. Such students usually have explicit knowledge of academic expectations, as well as an implicit understanding of campus culture, administrative systems, and the unwritten rules that guide academic and professional success (Collier & Morgan, 2008). Jack (2016) points out that students with more inherited and acquired cultural capital tend to seek help, ask questions, and develop relationships with faculty. This behavior enables them to convert campus resources and institutional agents into tangible forms of social capital. Their networks often include family, mentors, and professionals who offer guidance, provide access to internships, and share insider knowledge about navigating college and career paths.

On the other hand, FGCS often lack this inherited social capital. They generally have less access to informal advice, fewer relationships with influential faculty or professionals, and more difficulty interpreting ambiguous institutional signals (Whitley et al., 2018). For instance, understanding the subtleties of office hours,

which can be essential for academic support, building relationships, and starting professional networks, is often less straightforward for FGCS. Similarly, knowledge of key internship deadlines, research opportunities, and networking events may not be as readily available, which limits their opportunities to gain professional experience and connections. These obstacles are heightened by the absence of "college knowledge," meaning the practical and cultural understanding required for tasks like course selection, research participation, and internships (Pratt et al., 2017). By focusing on these structural barriers, rather than individual shortcomings, Bourdieu's theory serves as a valuable guide for research and for designing interventions to support FGCS.

Scholars building on Bourdieu's work, such as O'Shea (2016), have refined this framework by distinguishing between bonding and bridging social capital. Bonding social capital refers to support from close relationships with family and friends, which often leads to strong emotional backing and resilience. However, it can also create conflicting demands or reinforce cultural expectations that prioritize family responsibilities over campus involvement (Garriott & Nisle, 2018). In contrast, bridging social capital comes from wider networks, such as faculty, staff, professionals, and diverse peer groups. This form is especially important for accessing high-impact opportunities, building professional networks, and entering the broader academic and career environment needed for long-term success (Gist-Mackey et al., 2018).

Taken together, Bourdieu's theory and these refinements help clarify why FGCS often experience gaps in both bonding and bridging social capital, especially regarding professional networks. This theoretical perspective aligns closely with the focus of this review by emphasizing institutional structures, relationships, and networks as key factors shaping FGCS outcomes. The next section explores how social capital theory has been critiqued, expanded, and adapted, particularly through intersectional and contemporary perspectives, to better reflect the complex realities of FGCS in today's higher education landscape.

3. Critiques, Extensions, and Intersectional Perspectives

While social capital theory has long provided a valuable perspective for examining the experiences of FGCS, some scholars have argued that early interpretations of Bourdieu's work can be overly rigid or deterministic. These traditional views often focus too heavily on how social structures perpetuate inequality and tend to overlook the creativity and agency of students themselves. Jehangir (2010), for example, demonstrates that FGCS are not merely passive recipients of structural disadvantages. Instead, they actively create new forms of capital by engaging in peer mentoring, joining student organizations, and forming relationships with staff and supportive faculty members. These proactive strategies show that FGCS are capable of expanding their networks and accessing institutional resources, even in settings that were not originally designed with their needs in mind.

The concept of intersectionality has become an essential addition to social capital theory, particularly for understanding the diverse experiences of FGCS in higher education. Luedke (2017) shows that factors such as race, gender, and class come together to influence both the availability and quality of social capital. For instance, women and students of color who are FGCS often face extra challenges, including a lack of relatable faculty role models, frequent microaggressions, and being left out of informal mentoring and professional networks. These barriers can undermine students' sense of belonging and make it harder for them to develop the bridging social capital necessary for accessing valuable opportunities. Nichols & Islas (2016) further note that cultural and family expectations can place unique demands on FGCS, such as prioritizing family responsibilities or navigating cultural conflicts, which also affect how these students encounter and use social capital.

Advancements in technology have also changed the way social capital is developed, maintained, and used for academic and career mobility. Gist-Mackey et al. (2018) report that online platforms, social media, and virtual mentoring can help FGCS bypass physical and social obstacles by opening up new avenues for sharing information, networking, and receiving support. Digital environments can foster both bonding and bridging social capital, connecting students with peers, faculty, and professionals who are not physically present on campus. However, Gist-Mackey et al. (2018) also warn that if institutions do not invest in digital literacy, technological access, and inclusive practices, these tools may reinforce preexisting inequalities rather than reduce them.

Overall, a modern approach to applying social capital theory to FGCS should consider agency, intersectionality, and the impact of technology. It acknowledges that structural barriers continue to play a significant role, but also that students' combined identities, adaptive behaviors, and the institutional environment all shape how social capital is formed, limited, and used within higher education. These critiques and developments do not replace Bourdieu's original ideas; rather, they enhance them by illuminating the complex ways FGCS build and utilize social and professional networks. This more sophisticated framework sets the foundation for the following literature review, which investigates how social capital, mentoring, and institutional practices affect the outcomes of FGCS across different contexts.

4. Literature Review

Research on first-generation college students (FGCS) and social capital has grown and shifted significantly in the past twenty years. Early studies made it clear that FGCS face systemic challenges to academic achievement, career growth, and personal well-being, primarily due to differences in social capital. More recent work has moved beyond simply identifying what FGCS lack, instead exploring the complex ways in which social capital is formed, limited, and put to use within different institutional and cultural settings. This review brings together current findings to explore (1) the origins and patterns of social capital among FGCS, (2) the impact of professional networks and mentorship, (3) the effects of intersecting identities, and (4) the barriers and supports present in institutional contexts. Each topic is examined through a rigorous, evidence-based lens, drawing on unique sources for every key point.

4.1 Patterns and Sources of Social Capital among FGCS

When compared to students whose parents completed college, FGCS frequently begin their higher education journey with a noticeable lack of social capital, a disadvantage that influences their engagement and sense of belonging throughout their studies (Soria & Stebleton, 2012). Here, social capital means more than just the number of people a student knows: it encompasses the quality, variety, and usefulness of those relationships in helping them navigate coursework, campus life, and resources. FGCS commonly have fewer family members or close acquaintances who can provide practical advice on course selection, major decisions, or the complexities of financial aid. This gap can leave them feeling isolated or unsure about how to successfully manage college (Stephens et al., 2012). Research indicates that social isolation and lack of supportive networks contribute to a significantly higher attrition rate among first-generation college students (FGCS); FGCS are 71% more likely to drop out than their continuing-generation peers, underlining the critical need for targeted supportive interventions (Alger, 2024).

Cataldi et al. (2018) found that the deficit in inherited knowledge and social connections among FGCS is not only about their parents' education level but also mirrors wider inequalities in access to institutional resources. Their national survey revealed that FGCS are less involved in extracurricular activities (54% compared to 72% for non-FGCS), have fewer informal interactions with faculty (28% vs. 43%), and are less likely to participate in impactful opportunities like undergraduate research or study abroad (19% vs. 34%). These gaps are often made worse by the responsibilities FGCS face outside school, including work or family obligations, which further limit their ability to create new networks or seek help (Collier & Morgan, 2008).

Nevertheless, some FGCS manage to draw on strong bonding capital: close, supportive ties within families or communities that can offer emotional resilience and encouragement when facing adversity (Hébert, 2018). Yet these bonds can also create conflicting expectations, such as needing to contribute financially or put family needs ahead of academic priorities, which restrict chances for campus involvement or professional growth (Garriott & Nisle, 2018). Nationally, about 70% of FGCS are employed alongside their studies, and 65% work at least 20 hours weekly, leaving limited time for campus life; roughly 80% of these students report that the transition to college is especially challenging without robust institutional support (Moschetti & Hudley, 2014). The diversity of FGCS backgrounds is an essential consideration: those from rural, low-income, or marginalized groups may face distinct patterns of advantage or constraint depending on the kinds of social capital available to them (Redford & Hoyer, 2017).

While existing scholarship has laid a substantial groundwork for understanding the nature and distribution of social capital among first-generation college students, it often emphasizes broad statistical trends rather than the nuanced, day-to-day realities influencing how these students access and utilize their networks. There remains a clear need for in-depth, qualitative investigation into how diverse FGCS creatively mobilize their social capital to address educational challenges. Addressing this gap calls for greater inclusion of student perspectives and a more comprehensive account of the varied strategies they employ in higher education. The following section will further this discussion by analyzing the role of professional networks and mentorship, and by considering institutional strategies that can support FGCS success.

4.2 The Role of Professional Networks and Mentorship

Building professional networks and finding effective mentorship are crucial for FGCS, playing a significant role in student retention, career development, and long-term achievement. Stanton Salazar (2011) explains that students with college-educated parents often leverage family or community connections to obtain internships, job leads, and career guidance from professionals. FGCS, on the other hand, frequently lack these built-in resources, making them less confident about their career prospects and less aware of opportunities after graduation. Sudbrock et al (2024) note that first-generation college students frequently report feeling underprepared in domains such as teamwork, leadership, and intercultural communication. These skills are most often cultivated through active participation in networking and mentoring activities. Importantly, networking should be framed as a teachable competency rather than an innate skill, emphasizing the responsibility of institutions to integrate networking skills into curricula. Fostering an inclusive learning environment empowers students by equipping them with essential tools for career advancement (Parks-Yancy & Cooley).

Mentoring, whether through organized university programs or informal connections with faculty, peers, or professionals, can provide substantial benefits for first-generation students. Mentors not only offer advice on academics and career decisions but also assist students in making new connections and foster a much-needed sense of belonging. This kind of support keeps FGCS on track academically while also boosting their confidence as they pursue future opportunities. Studies of FGCS stress that the most effective mentors encourage students, share knowledge about how to navigate complex institutional environments, and advocate for their mentees' goals. Even so, FGCS are frequently reluctant to approach faculty or get involved in mentoring programs, often because they are unsure how to interact with authority figures or worry about being seen as unqualified (Jack, 2016).

In the same way, access to professional networks opens doors to internships, employment, and key contacts that might otherwise be inaccessible to FGCS. Establishing these networks usually depends on deliberate institutional backing. As Gist-Mackey et al. (2018) point out, online platforms and digital communities can broaden mentoring and networking prospects, particularly for students who face geographic barriers or juggle work and family commitments. Virtual mentoring, peer support groups, and professional online networks can supplement traditional relationships on campus, offering flexible ways to build skills and explore careers. However, gaps in digital skills and access persist, highlighting the importance of universities investing in technology training and digital support for FGCS.

The institutions that best support FGCS do more than just offer formal mentoring programs. They also foster a welcoming campus atmosphere that encourages students to form informal relationships through classes, student groups, and campus activities (Jehangir, 2010). Peer mentoring is especially impactful, as seasoned FGCS can guide newcomers through academic and social hurdles and strengthen their own self-assurance and leadership. Empirical evidence shows that peer mentoring boosts retention and engagement levels (Soria & Stebleton, 2012). In the end, investing in mentorship and networking is essential for promoting student growth, campus equity, and long-term achievement.

In addition to these efforts, universities that prioritize faculty development to increase understanding of FGCS experiences and build inclusive campus environments tend to see greater improvements in student persistence (Jehangir, 2010). Comprehensive support services such as resource centers and peer-led mentoring serve not only to address academic questions but also to build a sense of belonging, which is consistently linked to better FGCS retention (Stebleton et al., 2014). When these resources are integrated and sustained across the institution, they help disrupt patterns of isolation and empower students to access both bonding and bridging social capital. Mentoring is not a cure-all for FGCS challenges. O'Shea (2016) warns that for mentoring to be effective, it needs to be deliberate, culturally sensitive, and maintained over a long period. Brief or generic programs can reinforce inequity by favoring students who are already confident and adept at seeking help. Best practices suggest pairing FGCS with mentors who have similar backgrounds or specialized training in supporting first-generation students. Such mentoring relationships should combine practical guidance with emotional encouragement and affirmation.

The literature consistently emphasizes the importance of professional connections and mentoring in promoting positive outcomes for FGCS. Nonetheless, there is limited research on the effectiveness of informal, culturally responsive mentorship and peer-led support systems across various institutional contexts. Future studies should give greater attention to these organically developed support structures, as well as to the interplay between digital and in-person networks for FGCS. Bridging this research gap is essential to ensure equitable access to vital social capital for all students. The next section will address how intersectional factors such as race, gender, and socioeconomic status further shape the experiences of first-generation college students.

4.3 Intersectional Influences: Race, Gender, and Socioeconomic Status

FGCS who belong to underrepresented racial or ethnic groups often face unique institutional obstacles that affect their ability to access social capital. Garriott et al. (2015) discovered that FGCS of color report lower levels of academic and life satisfaction than their white counterparts, mainly because they have less access to mentorship and support networks that are culturally relevant. The research shows that minority FGCS are more prone to cultural isolation, limiting their chances to develop bridging social capital with faculty or campus leaders.

Socioeconomic background adds another layer of complexity to the FGCS journey. Hébert (2018) observes that while money-related pressures and family duties can encourage a strong academic drive, they also tend to limit involvement in campus activities or internships. Many FGCS must work significant hours outside school, which reduces the time and energy they have for networking events, research projects, and other experiences that foster social capital.

Gender is another important dimension that affects the experiences and challenges of FGCS. Ives & Castillo-Montoya (2020) point out that FGCS women often face overlapping challenges both at home and in academic settings, including the expectation to take on family responsibilities and the lack of female mentors in their fields. According to Cataldi et al. (2018), women make up 56% of the FGCS population, and nearly 62% of

these women juggle caregiving duties while in school, compared to 39% of continuing-generation women. These overlapping demands can lead to distinct forms of isolation and shape the ways FGCS women look for support and success.

Cultural identity and support from peer networks are especially important for Latinx FGCS. Gloria & Castellanos (2012) observed that Latinx students frequently rely on tight-knit peer groups and campus-based cultural organizations for both emotional support and practical advice. While these groups deliver vital bonding capital, the authors note that they can sometimes be insular, restricting access to broader institutional opportunities such as internships or research positions that depend on bridging capital.

Race, social class, and other intersecting identities add further complexity to the experiences of FGCS. While much research has focused on first-generation/low-income (FGLI) students, it is important to note that not every FGCS comes from a low-income background. Differences in race, ethnicity, gender, and immigration status can all create unique patterns of challenge and opportunity (Lareau, 2011; Terenzini et al., 1996). For example, first-generation students of color may contend with cultural pressures or microaggressions that diminish their sense of belonging, even if academic resources are available (Luedke, 2017). Those from high-income families may have more financial stability but still lack knowledge about college culture or career planning (Jack, 2016). Many FGCS also have to juggle competing cultural identities and expectations, which shape their academic journeys in ways that diverge from continuing-generation students. Because of this diversity, interventions must be adaptable, culturally sensitive, and responsive to intersecting identities. Colleges that embrace this complexity are better equipped to foster truly inclusive environments for all FGCS.

Geographic background adds another layer to the social capital landscape for FGCS. Redford & Hoyer (2017) report that rural first-generation students face unique obstacles: they might not have local role models with college experience, have limited chances for campus involvement, and may sometimes feel out of place in urban or suburban universities. These spatial and cultural dynamics often lead to lower participation in extracurriculars and fewer opportunities to develop the relationships that are key to academic progress and professional growth.

Reflecting on this section, I find that the literature provides a comprehensive overview of how race, gender, socioeconomic status, cultural identity, and geography intersect to influence the experiences of FGCS. Despite this, there is still a need for research that examines how these identities interact in more complex ways, especially in rapidly changing campus environments. I believe that capturing the voices of students at these intersections will be essential for crafting interventions that are flexible, nuanced, and responsive to real-world diversity. The next section will focus on institutional barriers and sources of support that further shape FGCS outcomes.

4.4 Institutional Barriers and Support

Institutional barriers for FGCS often arise before they even enroll in college. Almeida et al. (2021) found that first-generation students are less likely to receive informal guidance about admissions, scholarships, and campus resources. When universities do not offer clear and proactive outreach, FGCS are left to navigate complicated applications and financial aid processes on their own, putting them at a disadvantage compared to students whose parents have college experience. After enrolling, the absence of proactive support for FGCS becomes more obvious. Wilbur & Roscigno (2016) report that many colleges expect students to find help on their own, rather than building outreach and advising structures tailored to the needs of FGCS. This reactive approach is especially challenging for those unfamiliar with navigating bureaucracy, reinforcing social capital gaps and leading to lower rates of retention and graduation.

The climate of the campus and the opportunities for engagement play a critical role in retaining FGCS. Pratt et al. (2017) found that a strong sense of belonging, built through living-learning communities, affinity spaces, and inclusive campus programs, is one of the strongest factors predicting FGCS persistence. Specific practices such as peer mentorship programs, cultural affinity groups, and faculty-student research collaborations greatly contribute to a sense of belonging, elevating belonging scores. FGCS with high belonging scores, averaging 8.13 out of 10 in college, were 35% more likely to remain enrolled the following year than those with lower scores. However, these scores decrease to an average of 7.75 in doctoral programs, indicating that connection tends to decline as students move into advanced studies (Tonkaboni et al., 2013). This drop is due to greater independence and less involvement in group activities, which can erode social engagement and trust, essential parts of social capital.

D'Agostino (2022) defines social capital as the strength of supportive, informational relationships. She also points out that about 70% of jobs are never advertised and up to 85% are filled through networks (Parks-Yancy & Cooley, 2018), making these connections crucial for career success after college. FGCS from low-income or underrepresented backgrounds usually have fewer of these connections; this places them at a disadvantage compared to their continuing-generation peers, who often benefit from inherited or early exposure to such networks.

Academic advising is another essential form of support for FGCS. Roberts & Styron (2010) emphasize that advisors who are aware of the unique challenges FGCS face can fill information gaps and guide students in making wise choices about courses, degree plans, and future careers. However, they also found that advising varies widely in quality, often depending on whether staff are culturally competent and how much the institution invests in advising resources. Drawing on this, it is important to understand that effective advising for first-generation college students should encompass more than just helping with course selection and degree requirements. Advisors need to be prepared to act as institutional advocates, actively connecting students with academic opportunities, professional networks, and campus resources that they might not easily find on their own.

Furthermore, FGCS frequently experience uncertainty when planning for life after graduation. Sudbrock et al. (2024) reported that many FGCS do not know about available career resources, internships, or alumni networks. Without clear and accessible pathways to jobs or further study, these students may feel unprepared for the transition beyond college. The research recommends that universities make career support more visible and design programs specifically for FGCS needs.

While research on institutional barriers and support for FGCS highlights systemic challenges, it often relies on generalized solutions that overlook the specific needs of diverse student groups. Little insight exists into how FGCS themselves experience and evaluate institutional support. Drawing on these observations, the next section will synthesize key findings and present targeted recommendations for bridging social capital gaps among FGCS.

5. Discussion and Recommendations

Building on the key challenges and opportunities identified in the literature review, this section presents targeted recommendations for closing the social capital gap among first-generation college students (FGCS). These proposals draw directly from the synthesis of research findings and reflect both the structural and cultural dimensions of FGCS experiences.

5.1 Implications and Recommendations

These findings underscore the necessity for a multifaceted strategy to support FGCS. While academic readiness and financial support are vital, the research indicates that social capital, a sense of belonging, and access to networks are just as, if not more important, for FGCS achievement. The most effective interventions are comprehensive, blending academic, social, and emotional assistance. For example, programs that connect FGCS with faculty mentors, peer groups, and hands-on learning opportunities can enhance resilience and self-confidence (Soria & Stebleton, 2012; Gibbons et al, 2016). Providing consistent, long-term engagement instead of one-off efforts allows students to build skills and adapt to new challenges.

Additionally, it is critical to consider the practical constraints faced by resource-limited or demographically different institutions. These institutions can adapt recommendations by prioritizing scalable and cost-effective initiatives, such as online mentoring platforms, community partnerships, or collaborative programs that leverage shared resources. By tailoring interventions to specific institutional contexts, a wider range of academic settings can implement effective strategies to support FGCS.

Importantly, the most impactful programs give FGCS real input in leadership and program design, ensuring their voices shape the resources intended for their success. A crucial consideration is to involve FGCS directly in program design committees, asking questions such as "What decisions can FGCS vote on?" to truly integrate their perspectives and reinforce the participatory ethos.

To operationalize these recommendations, institutions must implement specific program models like "First-Gen Success Centers," which serve as dedicated spaces for mentoring, community building, and resources specifically tailored to FGCS. Additionally, colleges and universities could establish "Peer Ambassador Programs," where successful FGCS mentor incoming students, helping them to integrate and take advantage of available opportunities.

Partnerships with local businesses and organizations to create exclusive internship opportunities for FGCS can play a vital role. Policy changes, such as integrating FGCS perspectives into curriculum development and ensuring representation in student governance bodies, can further institutionalize these efforts. These concrete steps will help instructors evaluate the real-world applicability and impact of such strategies.

The evidence shows that bridging the social capital gap for FGCS requires more than just standard academic help. It calls for targeted, context-aware actions at various levels, including policy, campus practice, and professional preparation, built on an understanding of intersectionality and how institutions operate. The following section focuses specifically on how these insights can be translated into institutional policy and campus practice.

5.2 Institutional Policy and Campus Practice

Culturally responsive mentorship and high-quality advising are essential for achieving equity for FGCS in higher education. Ives & Castillo-Montoya (2020) stress the importance of universities investing in training for faculty and staff, so they can truly understand and address the unique challenges FGCS face. Going beyond

surface-level support, the most impactful programs blend academic guidance with emotional and psychological support and specifically acknowledge the lived experiences of students who hold multiple marginalized identities. Such programs help FGCS feel seen and supported, leading to more meaningful engagement and persistence.

Creating a campus environment where FGCS feel a sense of belonging is critical to their persistence and success. Stebleton et al. (2014) found that students involved in living-learning communities, peer-facilitated workshops, or affinity groups designed specifically for FGCS backgrounds are more likely to remain in school and achieve academic success. To ensure these initiatives work, it is essential for colleges to engage in active outreach and to involve current FGCS in the design and ongoing assessment of these programs. This participatory approach not only increases effectiveness but also empowers FGCS as co-creators of their educational experience.

Clear, transparent communication and strategic outreach are also vital. Roberts & Styron (2010) point out that many FGCS do not take advantage of existing resources, often because the information is not presented in a way that is accessible or culturally relevant. To address this, institutions should use peer ambassadors, expand digital outreach, and provide multilingual materials, ensuring all FGCS are both aware of and comfortable accessing support services. These proactive measures help bridge gaps in awareness and build trust between FGCS and the institution. Beyond campus-based support, attention must also shift toward how institutions and policymakers can strengthen FGCS' professional preparation and long-term career pathways.

5.3 Professional Preparation and Broader Policy Direction

Ensuring that all FGCS have access to high-impact learning experiences must be a central goal for universities. Glass (2023) highlights that structured, paid internships, research projects, and partnerships with employers can be especially valuable for FGCS. These experiences, when made truly inclusive, help students develop professional connections and build the confidence needed for successful careers. Beyond internships, options like undergraduate research, service learning, and leadership roles in student organizations further enhance the skills and social capital that drive career growth. Universities should integrate these opportunities into the broader curriculum and make them visible and attainable for FGCS through dedicated outreach and support programs.

Removing financial obstacles is a key part of supporting FGCS. Engle & Tinto (2008) recommend that strong financial aid packages should be paired with consistent, proactive advising and clear information about navigating university processes. This comprehensive approach is strongly associated with higher rates of persistence and graduation for FGCS.

Effective advising should address not only academics but also career planning, financial literacy, and early connections to campus resources, helping FGCS understand the full pathway from college entry to career launch and empowering them to pursue competitive opportunities with confidence.

Ongoing, data-driven assessment is critical for holding institutions accountable and ensuring progress for FGCS. Toutkoushian et al. (2018) argue that universities should regularly collect and analyze detailed data on FGCS outcomes, such as retention rates, network size, and students' sense of belonging. Additionally, gathering frequent feedback from students themselves can provide insights into their experiences and needs. Suggested data collection methods include surveys, focus groups, and interviews that capture qualitative and quantitative data on students' academic and social integration. Using this information to continually adapt and refine support programs helps keep interventions relevant and effective. This process also gives FGCS a direct role in shaping the resources and policies that impact them, which boosts engagement and trust in the institution.

On the policy front, partnerships between universities, employers, and public agencies are essential. Gopalan & Brady (2020) point out the limited availability of paid internships and urge policymakers and college leaders to work together to expand these opportunities, so FGCS can take advantage of experiential learning without facing financial strain. More broadly, policy should aim to incentivize employer partnerships, provide targeted funding for internships and experiential programs serving underrepresented students, and encourage flexible work-study options. Aligning institutional efforts with supportive policy action can help break down barriers to professional preparation and drive upward mobility for FGCS.

6. Limitation of the Study

Several limitations of this review should be acknowledged. As a literature-based synthesis, the analysis is limited by the scope, methodologies, and contexts of existing research on first-generation college students (FGCS). Most available literature centers on U.S. four-year institutions, which may limit the applicability of findings to community colleges, international contexts, or nontraditional student groups. While an intersectional perspective is employed, many studies do not disaggregate results by race, gender, socioeconomic status, or institutional type, which restricts comparative analysis. Additionally, reliance on published scholarship may lead to the underrepresentation of emerging or informal institutional practices that support FGCS but have not yet been empirically examined.

7. Direction for Future Research

Future research should prioritize qualitative and mixed-methods studies that focus on the lived experiences of first-generation college students across a range of institutional contexts. Longitudinal studies examining the development of professional networks and social capital over time could provide deeper insights into student persistence and post-graduation outcomes. Additionally, scholars should assess the effectiveness of digitally mediated mentoring, peer-led support models, and institution-wide first-generation initiatives, with particular attention to students holding multiple marginalized identities. Broadening research to include institutions beyond the four-year model and integrating international perspectives would further advance the field and support the development of more inclusive, evidence-based institutional practices.

8. Conclusion

First-generation college students (FGCS) are essential to advancing educational equity and social mobility, yet they face persistent barriers rooted in social, economic, and institutional factors. These challenges, especially regarding social capital and professional networks, require institutions to move beyond one-size-fits-all support and address FGCS' intersecting identities and unique backgrounds, which research shows can significantly improve persistence and achievement (Whitley, 2018; Stebleton et al., 2014).

Meaningful progress depends on comprehensive, culturally responsive efforts like mentoring, experiential learning, and leadership development, guided by regular assessment and student feedback. Reducing financial burdens, expanding professional networks, and strengthening collaboration among educators, policymakers, and employers are all critical steps to dismantling systemic barriers and providing equitable resources (Parks-Yancy & Cooley, 2018).

The literature also demonstrates that FGCS must often work harder to navigate college life without inherited networks or "college knowledge," highlighting persistent disparities in social capital (Gist-Mackey et al., 2018). Despite these obstacles, many FGCS display remarkable agency and resilience by forging supportive communities and developing adaptive strategies to succeed (Hébert, 2018). However, individual effort is not enough. Institutional responsibility, through mentorship, inclusive campus climates, and proactive advising, is necessary to close social capital gaps and transform campus culture (Padgett et al., 2012).

As we look towards the future, imagine what your campus could look like five years from now if these recommendations are fully embraced: a more vibrant and inclusive college community, increased FGCS representation in leadership roles, a culture that truly supports diversity and innovation, and a network of alumni actively mentoring current students and opening career opportunities. What role will your institution play in pioneering these changes, and are you ready to commit to this transformation for the betterment of every FGCS who steps onto your campus?

Ongoing research, assessment, and advocacy are necessary to ensure FGCS voices remain central in shaping support programs. As Lareau (2011) reminds us, educational equity depends on dismantling barriers and centering social capital as a tool for reform and opportunity for all. In sum, this review has demonstrated how social capital frameworks, particularly those extending Bourdieu's theory, illuminate both the challenges and opportunities faced by first-generation college students. By analyzing the mechanisms of social capital, intersectionality, and institutional context, and by identifying the most effective interventions, this work has addressed the central question of how social capital shapes FGCS outcomes and what universities can do to promote greater equity.

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